

12/5/87

116001

Date Out EAB:

DEC 5 1987

To: G. Werdig
Product Manager 50
Registration Division (TS-767)

From: Patrick Holden, Team Leader DWK
Ground-Water Team
Exposure Assessment Branch
Hazard Evaluation Division (TS-769)

Attached please find the environmental fate review of:

Reg./File No.: _____

Chemical: Triclopyr _____

Type Product: _____

Product Name: _____

Company Name: _____

Submission Purpose: Response to Ground-Water Data Call In _____

ACTION CODE: 495 _____

Date In: _____

EAB # 80110 _____

Date Completed: _____

TAIS (level II) Days
1.00

Deferrals To:

- Ecological Effects Branch
- Residue Chemistry Branch
- Toxicology Branch

Monitoring study requested by EAB: / /

Monitoring study voluntarily conducted by registrant: / /

REGISTRATION DIVISION DATA REVIEW RECORD

Confidential Business Information - Does Not Contain National Security Information (E.O. 12065)

11-16-87

I. CHEMICAL NAME

Triclopyr

2. IDENTIFYING NUMBER 116001	3. ACTION CODE 495	4. ACCESSION NUMBER -	TO BE COMPLETED BY: PM
			5. RECORD NUMBER 207,668
			6. REFERENCE NUMBER
			7. DATE RECEIVED (EPA) 11/3/87
			8. STATUTORY DUE DATE 30 DAYS
			9. PRODUCT MANAGER (PM) Gwendolyn B. Briggs
			10. PM TEAM NUMBER 50

14. CHECK IF APPLICABLE

- ☐ Public Health/Quarantine
- ☐ Minor Use
- ☐ Substitute Chemical
- ☐ Part of IPM
- ☐ Seasonal Concern
- ☐ Review Requires Less Than 4 Hours

AAH

TO BE COMPLETED BY: PCB

11. DATE SENT TO HED/TSS
11-16-87

12. PRIORITY NUMBER
29

13. PROJECTED RETURN DATE
12-16-87

15. INSTRUCTIONS TO REVIEWER

- A. HED ☐ Total Assessment - 3(c)(5)
- ☐ Incremental Risk Assessment - 3(c)(7) and/or E.L. Johnson memo of May 12, 1977.
- B. SPRD (Send Copy of Form to SPRD PM)
- ☐ Chemical Undergoing Active RPAR Review
- ☐ Chemical Undergoing Active Registration Standards Review

- C. ☐ BFSD
- D. ☐ TSS/RD
- E. ☐ Other

F. INSTRUCTIONS

Review Protocols for Adsorption/Desorption
forest dissipation, studies and
Submit comments to DCL.

16. RELATED ACTIONS

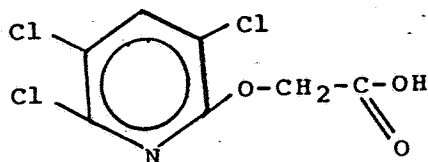
17. 3(c)(1)(D)		18. REVIEWS SENT TO							
<input type="checkbox"/> Use Any or All Available Information <input type="checkbox"/> Use Only Attached Data for Formulation and Any or All Available Information on the Technical or Manufacturing Chemical.		<input type="checkbox"/> TB <input type="checkbox"/> RCB <input type="checkbox"/> EEB <input type="checkbox"/> EFB <input type="checkbox"/> EF <input type="checkbox"/> CH <input type="checkbox"/> PL <input type="checkbox"/> BFSD							
19. To		NUMBER OF ACTIONS							
TYPE OF REVIEW		Registration	Petition	EUP	SLN	Sec. 18	Inert	MNR. USE	Other
HED	TOXICOLOGY								
	ECOLOGICAL EFFECTS								
	RESIDUE CHEMISTRY								
	ENVIRONMENTAL DATA								
RD/TSS	CHEMISTRY								
	EFFICACY								
	PRECAUTIONARY LABELING								
BFSD	ECONOMIC ANALYSIS								
20. <input type="checkbox"/> Label Submitted with Application Attached		21. <input type="checkbox"/> Confidential Statement of Formula		22. <input type="checkbox"/> Representative Labels Showing Accepted Uses Attached		23. Date Returned to RD (to be completed by HED)		24. Include an Original and 4 (four) Copies of This Completed Form for Each Branch Checked for Review.	

1. CHEMICAL:

Common name: Triclopyr, Garlon

Chemical name: 3,5,6-trichloro-2-pyridinyloxyacetic acid

Structure:



2. TEST MATERIAL:

Radiolabelled triclopyr will be used, purity unknown.

3. STUDY TYPE:

Protocol for Leaching & Adsorption/Desorption 163-1.
Protocol for Forest Field Dissipation 164-3.

4. STUDY IDENTIFICATION:

Protocol: An Adsorption/Desorption Study of Triclopyr (3,5,6-trichloro-2-pyridinyl)-oxyacetic acid. K.B. Woodburn. April 1, 1987.

Dispersal and Degradation of Triclopyr within a Canadian Boreal Forest Ecosystem Following an Aerial Application of Garlon * 4 Herbicide. Experimental Protocol. D.D. Fontaine, et al. April 28, 1987.

5. REVIEWED BY:

Catherine Eiden
Ground-Water Team

6. APPROVED BY:

Patrick Holden, Team Leader
Ground-Water Team

12/5/87

7. CONCLUSIONS:

EAB has reviewed the protocol for adsorption/desorption experiments on triclopyr and degradates. EAB concludes the protocol is adequate. It includes the pertinent points to consider in conducting an adsorption/desorption study on triclopyr and degradates. The studies will be carried out on 4 soil types.

EAB further concludes the registrant should consider the following points:

1. The equilibration time to be used during adsorption should be determined prior to beginning any experiments.
2. Kd values as well as Koc should be reported. Kd is determined as ug triclopyr/gm soil at an equilibrium concentration of 1 ppm.
3. Graphs of Freundlich isotherms should be included.

EAB has reviewed the Forest Field Dissipation protocol. The protocol outlines a very thorough forest field dissipation study. All points pertinent to the study as discussed in Subdivision N Guidelines appear to have been addressed. The stated purpose of the study, to determine dissipation rates of triclopyr in its ester and acid forms and as the degradate pyridinol in foliage, leaf litter, soil, pond and stream water, is adequately supported by the proposed sampling schedules and study duration as outlined in Subdivision N.

In general, the protocol sampling schedule, number of samples, frequency of sampling and duration are adequate.

EAB brings the following points to the registrant's attention:

1. All pertinent points regarding site selection and characterization were covered. However, EAB assumes that part of the vegetation to be sampled in transects is the pest of interest as triclopyr is an herbicide. The Guidelines ask for information on "dates and stages of pest development". Has the protocol addressed this point?
2. Adequate data will be collected on temperature, soil, air and sediment. Data on rainfall and pan evaporation will be collected on site, if possible. If not, data will be taken from the nearest weather station. EAB agrees with this approach for the pan evaporation data, but not for the daily rainfall data. A small rain gauge should be installed at the experimental site for the collection of rainfall data.
3. Soil characterization including percentages organic carbon, sand, silt, clay, and pH and CEC will be determined.
4. Stream and pond water will be monitored for pH, DO, temperature, and conductivity. Stream flow will also be measured.

5. The protocol appears to outline 1 application for triclopyr at 3.84 kg/ha. However, the protocol also mentions "applications" plural. How many applications at 3.84 kg/ha will be used? Is this the maximum label use rate?

6. Minimum detection limits (MDLs) on the methods for leaf litter, foliage, sediment, and aquatic plants are 50-100 ppb, 10-50 ppb for soil, and 10 ppb for water. The MDL for the water samples seems high. A more acceptable MDL on the water method would approach 0.1-1.0 ppb.

(A second protocol for a forest field dissipation study on picloram was submitted. As this submission is for triclopyr, this protocol is being returned, unreviewed.)

8. RECOMMENDATION:

For the adsorption/desorption study:

1. Follow the protocol.
2. Determine the equilibration time for adsorption/desorption experiments up front.
3. Provide graphs of the isotherm data.

For the forest field dissipation study:

1. Has the protocol addressed the need to gather data on the "dates and stages of pest development"?
2. Collect rainfall data on site.
3. Does the use rate given in the protocol equal the maximum label use rate?
4. How many applications at 3.84 kg/ha will be made?
5. The MDL on the water analyses is high, 10 ppb. Can it be lowered?

9. BACKGROUND:

See protocol.

10. DISCUSSION OF INDIVIDUAL STUDIES:

See protocol.

11. ONE-LINER:

Not applicable.

12. CBI:

No CBI included with this package.